

FA01314

GaAs FET HYBRID IC

DESCRIPTION

FA01314 is RF Hybrid IC designed for 1.7GHz band small size hand held radio.

FEATURES

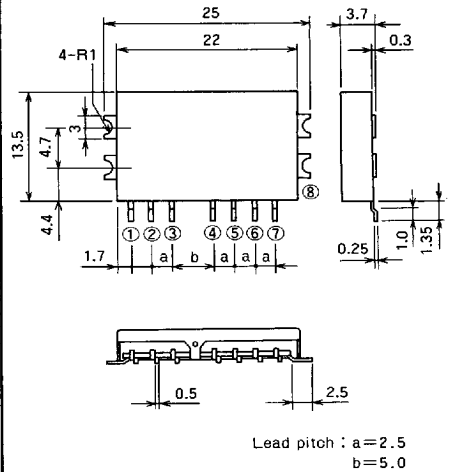
- High efficiency 40 (%)
- High power 33 (dBm)
- High gain 33 (dB)
- Small size 25×14×4 (mm)
- Frequency range 1710~1785 (MHz)

APPLICATION

Small size hand held radio for 1.7GHz band.
Modulation : GMSK

OUTLINE DRAWING

Dimensions in mm



- Lead pitch : a=2.5
b=5.0
- ① RF INPUT ⑤ V_{G3}
 - ② V_{D1} ⑥ V_{D3}
 - ③ V_{G1,2} ⑦ RF OUTPUT
 - ④ V_{D2} ⑧ GND (FIN)

GH-10

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Rating	Unit
V _D	Supply voltage	9	V
V _G	Gate bias voltage	-5.5	V
I _{D1}	Drain current (1st stage)	100	mA
I _{D2}	Drain current (2nd stage)	200	mA
I _{D3}	Drain current (3rd stage)	900	mA
P _{in}	Input power	7	dBm
T _{c (OP)}	Operation case temperature	-20 ~ +85	°C
T _{stg}	Storage temperature	-30 ~ +90	°C

Each Maximum Ratings is guaranteed independently and under pulse operation.

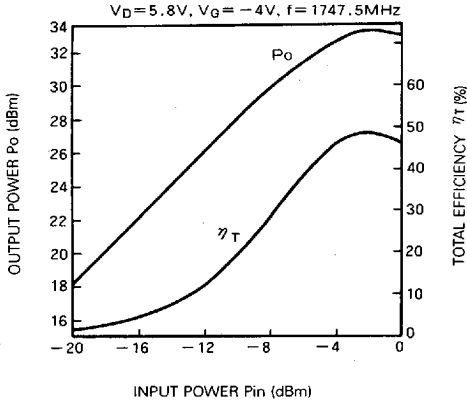
ELECTRICAL CHARACTERISTICS (T_a=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
f	Frequency		1710	—	1785	MHz
P _{in}	Input power		—	0	3	dBm
η _T	Total efficiency	P _O =33.0dBm	38	40	—	%
ρ _{in}	Input VSWR	V _{D1} =V _{D2} =V _{D3} =5.8V, V _{G1} =V _{G2} =V _{G3} =-4.0V	—	—	—	—
2f ₀	2nd harmonics	Z _G =Z _L =50 Ω	—	—	-30	dBc
3f ₀	3rd harmonics		—	—	-30	dBc

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TYPICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)



EQUIVALENT CIRCUIT

